



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/522,097

01/24/2005

Elmar Kibler

3165-115

9494

6449

7590

04/16/2009

ROTHWELL, FIGG, ERNST & MANBECK, P.C.
1425 K STREET, N.W.
SUITE 800
WASHINGTON, DC 20005

EXAMINER

BROWN, COURTNEY A

ART UNIT

PAPER NUMBER

1616

NOTIFICATION DATE

DELIVERY MODE

04/16/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

Office Action Summary	Application No. 10/522,097	Applicant(s) KIBLER ET AL.	
	Examiner COURTNEY BROWN	Art Unit 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,25,26 and 30-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,25,26 and 30-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Acknowledgement of Receipt/Status of Claims

This Office Action is in response to the amendment filed December 29, 2008.

Claims **1, 25, 26 and 30-37** are pending in the application. Claims **2-24** and **27-29** have been cancelled. Claims **1, 25** and **34** have been amended. Claims **36** and **37** are newly added. Claims **1, 25, 26 and 30-37** are being examined for patentability.

Rejections not reiterated from the previous Office Action are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set of rejections and/or objections presently being applied to the instant application.

New Rejection(s) Necessitated by the Amendment filed on December 29,,

2008

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or

Art Unit: 1616

would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Omum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims **1,25,26 and 30-35** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims **1, 8, 9, 23, and 26-32** of Application No. 10522157. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instantly claimed subject matter embraces or is embraced by the co-pending application.

The copending application is directed to the same synergistic herbicidal compositions with the same main component, component A, **4-[2-methyl-3-(4,5-dihydroisoxazol-3-yl-4-methylsulfonyl-benzoyl)-1-methyl-5-hydroxy-1H-pyrazole** and component C, **atrazine**. The difference between the invention of the instant application and that of co-pending application 10/522,157 is that the instant invention claims the use of a different component B, **clopyralid**, as opposed to two herbicides selected from the group including consisting of imazapyr, imazaquin, imazamethabenz-methyl, imazamox, imazapic and imazethapyr. It would have been obvious to one of ordinary skill in the art to replace two herbicides selected from the group including consisting of imazapyr, imazaquin, imazamethabenz-methyl, imazamox, imazapic and

Art Unit: 1616

imazethapyr, herbicidal component B of co-pending application 10/522,157, with another herbicidal component such as clopyralid. Thus, "It would be prima facie obvious to modify a synergistic composition which is taught by copending application 10/522,157 to be useful for the same purpose in order to form a resultant composition that is to be used for the very same purpose; the idea of combining them flows logically from their having been individually taught in prior art." In re Kerkhoven, 205 USPQ 1069 (C.C.P.A. 1980). From this extensive overlap of subject matter, one of ordinary skill in the art would recognize that the same product is produced in copending application 10/522,157.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Examiner's Response to Applicant's Remarks

Applicant's arguments filed on December 29, 2008 have been fully considered but are not persuasive. Applicant argues that the subject matter of the instant application is not effective but synergistic herbicidal mixtures and that it is known in the art that a synergistic effect cannot be predicted from the herbicidal activity of the individual components. However, the Examiner disagrees with this argument because co-pending application 10522,157 also claims a synergistic herbicidal mixture comprising the same components of the instant application: component A, **4-[2-methyl-3-(4,5-dihydroisoxazol-3-yl-4-methylsulfonyl-benzoyl)-1-methyl-5-hydroxy-1H-pyrazole** (claim 1, component A of co-pending application 10/522,097) and component C, **atrazine** (claim 1, component C of co-pending application 10/522,157). The

Art Unit: 1616

difference between the invention of the instant application and that of co-pending application 10/522,157 is that the instant invention claims the use of a different component B, clopyralid as opposed to two herbicides selected from the group including consisting of imazapyr, imazaquin, imazamethabenz-methyl, imazamox, imazapic and imazethapyr. It would have been obvious to one of ordinary skill in the art to replace two herbicides selected from the group including consisting of imazapyr, imazaquin, imazamethabenz-methyl, imazamox, imazapic and imazethapyr, herbicidal component B of co-pending application 10/522,157, with another herbicidal component such as clopyralid. Thus, "It would be prima facie obvious to modify a synergistic composition which is taught by co-pending application 10/522,157 to be useful for the same purpose in order to form a resultant composition that is to be used for the very same purpose; the idea of combining them flows logically from their having been individually taught in prior art." *In re Kerkhoven*, 205 USPQ 1069 (C.C.P.A. 1980). Further, the specification of co-pending application 10/522,157 teaches the use of clopyralid (page 5, line 13) in a synergistic combination with the instant composition's component A. The instant application also teaches the use of two herbicides selected from the group including consisting of imazapyr, imazaquin, imazamethabenz-methyl, imazamox, imazapic and imazethapyr in a synergistic combination with the instant composition's component A (see page 20, lines 4-9). Therefore, it would be expected that the substitution of clopyralid for two herbicides selected from the group including consisting of imazapyr, imazaquin, imazamethabenz-methyl, imazamox, imazapic and

Art Unit: 1616

imazethapyr as claimed in co-pending application 10/522,157, would result in a synergistic composition.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

Art Unit: 1616

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims **1, 25, 26 and 30-37** are rejected under 35 U.S.C. 103(a) as being unpatentable over Sievernich et al. (CA 2,334,955).

Applicant's Invention

Applicant claims a herbicidal mixture comprising three or four active ingredients including component A, **4-[2-methyl-3-(4,5-dihydroisoxazol-3-yl-4-methylsulfonyl-benzoyl)-1-methyl-5-hydroxy-1H-pyrazole]**; component B, **clopyralid**, (wherein component A and component B are present in a weight ration of 1:0.002 to 1:800); and component C, at least one herbicidal compound selected from the group consisting of at least one of acetyl-CoA carboxylase inhibitors, acetolactate synthase inhibitors, amides, auxin herbicides, auxin transport inhibitors, carotenoid biosynthesis inhibitors, enolpyruvylshikimate 3-phosphate synthase inhibitors, glutamine synthase inhibitors, lipid biosynthesis inhibitors, mitosis inhibitors, protoporphyrinogen IX oxidase inhibitors, photosynthesis inhibitors, synergists, growth substances, cell wall biosynthesis inhibitors (specifically **atrazine or flumetsulam**) or a variety of other herbicides in a synergistically effective amount. Applicant also claims the herbicidal mixture as defined

Art Unit: 1616

above wherein there is at least one inert liquid and/or solid carrier, and if desired, at least one surfactant. Additionally, applicant claims a process for preparation of the herbicidal composition and a method of controlling undesired vegetation comprising applying simultaneously or separately to the leaves of said vegetation, the environment of said vegetation and/or seed of said vegetation.

***Determination of the scope and the content of the prior art
(MPEP 2141.01)***

Sievernich et al. teach a synergistic herbicidal mixture comprising at least one 3-heteroxyxlyl-substituted benzoyl derivative, or its environmentally compatible salts.

Sievernich **teach 4-[2-methyl-3-(4,5-dihydroisoxazol-3-yl-4-methylsulfonyl-benzoyl)]-1-methyl-5-hydroxy-1H-pyrazole** as a most particularly preferred 3-heteroxyxlyl-substituted benzoyl derivative (page 20, lines 19-21, claims 1, 19, 21, and 34, component A of instant application).

Sievernich et al. teach that the said synergistic herbicidal mixture also comprises a synergistically effective amount of at least one herbicidal compound from the group consisting of acetyl-CoA carboxylase inhibitors, acetolactate synthase inhibitors, amides, auxin herbicides, auxin transport inhibitors, carotenoid biosynthesis inhibitors, enolpyruvylshikimate 3-phosphate synthase inhibitors, glutamine synthase inhibitors, lipid biosynthesis inhibitors, mitosis inhibitors, protoporphyrinogen IX oxidase inhibitors, photosynthesis inhibitors, synergists, growth substances, cell wall biosynthesis inhibitors or a variety of other herbicides (page 1, lines 4-40, page 1a, lines 1-6, page 2,

Art Unit: 1616

lines 1-6 and claims 1 of reference) Specifically, Sievernich et al. teach the use of **flumetsulam** (page 21, line 1, component C of instant application), **clopyralid** (page 21, line 14, component B of instant application), and **atrazine** (page 84, line 29, also component C of instant application).

Sievernich et al. teach, in a further particular embodiment, a synergistic herbicidal mixture comprising as component A, a 3-heteroaryl-substituted benzoyl derivative and as component B, **two herbicidal compounds** (page 34, lines 42-46, a ternary synergistic herbicidal mixture).

Sievernich et al. teach that as a rule, the mixture comprise components A and B in such weight ratios that the synergistic effect takes place (ratios of components A and C of the instant application) in the mixture preferably range from 1:0.002 to 1:800 (page 38, lines 20-24, claim 31 of instant application). Sievernich et al. teach, in particular, teach that the mixture comprises components A and B2 (acetolactate synthase inhibitors) 5-hydroxy-1H-pyrazole, flumetsulam or clopyralid, and a third herbicidal compound are not disclosed or suggested in Sievernich et al.. This is not persuasive because Sievernich et al. does teach, in a further particular embodiment in a weight ratio (ratios of components A and B of the instant application) in the mixture range from 1:0.004 to 1:106 (page 39, lines 13-40, claim 30 of instant application).

Sievernich et al. further teach that the herbicidal compositions have an herbicidally active amount of a synergistic herbicidal mixture and at least one liquid and/or solid carrier and if desired, at least one surfactant (page 2, lines 8-11, claims 32 and 33, solid and/or liquid carrier and surfactant, instant invention).

Art Unit: 1616

Sievernich et al. also teach that their invention relates to processes for preparation of said synergistic herbicidal mixtures and to a method of controlling undesirable vegetation (page 2, lines 13-15, claims 33 and 34, process of preparation and method of controlling undesired vegetation of instant application). Sievernich et al. teach that the active ingredients of components A) and B) can be formulated jointly, but also separately, and/or applied to the plants, their environment and/or seeds jointly or separately (page 37, lines 31-33, claim 34, applied to vegetation and/or seeds of instant application). Sievernich et al. teach that it is preferable to apply the active ingredients simultaneously, but it is possible to apply them separately (page 37, lines 33-35, claim 34, applied simultaneously or in separately of the instant application). Sievernich et al. further teach the mixtures can be applied pre-or post- emergence and that in the case of post-emergence treatment of the plants (page 38, lines 1-2), the herbicidal compositions according to the invention are preferably applied by foliar application (page 38, lines 11-13, claim 35 ,application to leaves, of instant application).

***Ascertainment of the difference between the prior art and the claims
(MPEP 2141.02)***

The difference between the invention of the instant application and that of Sievernich et al. is that the instant invention claims a specific ternary mixture comprising

Art Unit: 1616

A.) **4-[2-methyl-3-(4,5-dihydroisoxazol-3-yl-4-methylsulfonyl-benzoyl)]-1-methyl-5-hydroxy-1H-pyrazole**; B.) **clopyralid**; and C.) **flumetsulam** or **atrazine**.

Finding of prima facie obviousness

Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Sievernich et al. to arrive at a synergistic herbicidal mixture comprising A.) **4-[2-methyl-3-(4,5-dihydroisoxazol-3-yl-4-methylsulfonyl-benzoyl)]-1-methyl-5-hydroxy-1H-pyrazole**; B.) **clopyralid**; and C.) **flumetsulam** or **atrazine**. It would be obvious to one of ordinary skill in the art to devise a synergistic herbicidal mixture comprising these components because Sievernich teach a synergistic combination of component A with component B as well as a synergistic combination of components A and C. Further, Sievernich et al. teach, in a further particular embodiment, teach a synergistic herbicidal mixture comprising as component A, a 3-heteroxyxlyl-substituted benzoyl derivative and as component B, **two herbicidal compounds** (page 34, lines 42-46). Therefore, Sievernich suggests the use of a **ternary** synergistic herbicidal mixture.

One would be motivated to make this combination with the expected benefit of having a taught synergistic herbicidal mixture with enhanced effectiveness, depending on the third component being used. A composition that consists of the same

Art Unit: 1616

components will possess the same properties and therefore lead to identical, desired results.

All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

Therefore, the claimed invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made because every element of the invention has been fairly suggested by the cited reference.

Examiner's Response to Applicant's Remarks

Applicant's arguments filed on December 9, 2008 have been fully considered but they are not persuasive. Applicant argues that a ternary synergistic herbicidal mixture, comprising 4-[2-methyl-3-(4,5-dihydroisoxazol-3-yl-4-methylsulfonyl-benzoyl)]-1-methyl-5-hydroxy-1H-pyrazole, clopyralid and either sulfonamide or a triazine is not disclosed or suggested in Sievernich et al. However, Sievernich et al. do teach a synergistic herbicidal mixture comprising as component A, a 3-heteroxyxlyl-substituted benzoyl derivative and as component B, **two herbicidal compounds** (page 34, lines 42-46).

Art Unit: 1616

Applicant argues that Sievernich et al. do not demonstrate or provide examples of synergistic activity of compounds of formula I (i.e., a 3-heteroxyxlyl-substituted benzoyl derivative) with flumetsulam or clopyralid. Additionally, Applicant points out that Sievernich et al. do teach synergistic ternary mixtures of compound of formula I with other active compounds and that one of skill in the art would not be motivated to use mixtures other than those exemplified as synergistic mixtures. However the Examiner disagrees. This is not persuasive because obviousness is established by combining or modifying the teachings of the prior art as a whole to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the reference. Sievernich et al. teach a synergistic combination of component A with component B (clopyralid) as well as a synergistic combination of components A and C (flumetsulam or atrazine). Sievernich et al. do teach, in a further particular embodiment, a synergistic herbicidal mixture comprising as component A, a 3-heteroxyxlyl-substituted benzoyl derivative and as component B, **two herbicidal compounds** (page 34, lines 42-46) which suggests the use of a ternary herbicidal combination.

Additionally, Applicant argues that Sievernich et al. provides no indication as to how one might select the inventive components B (clopyralid) from a wide range of potential mixing partners and to choose an additional component C. This is not persuasive because Sievernich et al. do specifically claim a synergistic mixture with components clopyralid and flumetsulam selected from a group of about 28 different herbicidal compounds (see page 88, claim 14 of reference). Thus, this specific claimed group is very narrow in range and it would therefore be easy and common for

Art Unit: 1616

one of ordinary skill to arrive at a synergistic mixture comprising clopyralid and flumetsulam.

Therefore, the claimed herbicidal combination is not surprising and non-obvious in view of Sievernich et al.

The claims remain rejected.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR Only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Courtney Brown, whose telephone number is 571-270-3284. The examiner can normally be reached on Monday-Friday from 8 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Courtney A. Brown
Patent Examiner
Technology Center 1600
Group Art Unit 1616

/Johann R. Richter/
Supervisory Patent Examiner, Art Unit 1616